Castlemaine Naturalist

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Speckled Warbler - photo by Claire Morgan

A study of the Flinders Ranges

John Lindner has been walking in the Flinders Ranges almost every year for the past ten attempting to complete the Heyson trail or at least the northern part of it from Hawker to Parachilna gorge, a section at a time. At the last meeting he took us on an intriguing journey through deep time in a region which is renowned as of major geological interest.

The region known as the Flinders Ranges is very extensive, ranging from its southern extremities in the Burra wheat country to the northern most outcrops around Arkaroola, where it is surrounded by a vast horse-shoe shaped stretch of endoreic lakes which formed a formidable barrier to early explorers, from Lake Torrens to the west to Frome in the east. Four National Parks, including Wilpena Pound, are small compared to the total extent. The Gammon Range at the north end is very rugged and difficult walking, and Arkaroola which adjoins the Gammons is well known as a geological reserve.

John has experienced first hand the climatic extremes of this region, from massive flash flooding to huge dust storms during drought conditions. Winter can be very cold, but summer is too hot for walking.

Even though the 'Goyder line' was established in the nineteenth century (at the 250mm [10"] isohyet) separating country suitable for crops to its south from grazing land to the north, it was famously ignored during good years in the 1860s when wheat farming for export became lucrative. It was followed in the 1880s by a series of ruinous drought years which devastated the enterprise. The whole area remains littered with the ruins of stone buildings - a sad reminder of failure to understand the vagaries of

the Australian climate resulting in a disaster rivalling the Oklahoma dustbowl.

John went on to explain the geology of the Flinders; how the rocks were formed as a sequence of sedimentary layers in a pre-Cambrian 'basin' some 640 million years ago in a shallow sea, with copious sediments pouring from adjacent land surfaces at a time when no vegetation existed to inhibit erosion and run-off. This was during the (recently named) Ediacaran Period (620 - 520 mya) when the first evidence of multi-cellular life is found as impressions of soft-bodied sea creatures.

John showed us photographs of the Ediacaran fossil location in the Brachina creek, as well as evidence of a comet impact as a layer of angular debris; later beds in the sequence (540mya) containing Archeocyath fossils (a primitive sponge-like organism), and other details he has located in the course of his journeys.

He then went on to explain the structures evident today as a result of subsequent folding and faulting of the basin sedimentary rocks into broad anticlines and synclines. Erosion over a considerable time during and since the movement has resulted in the jagged ranges we see today. The classic synclinal shape is easily seen in an aerial view of Wilpena Pound.

Lots more information on the area was well illustrated and explained by John in the most comprehensive summary of the Flinders Ranges it has been my experience to enjoy.

- Noel Young

Seen While Birding

Damian Kelly

As you may have gathered from my previous articles, I am somewhat obsessed with observing and photographing birds. However, whilst out birding I am sometimes interrupted by other native animals, so I thought I might give an overview of the mammals that can be seen in the area that distract me whilst observing birds. As many are nocturnal they are hard to see, but if you don't know what is possible you may never realize what is out there.

Although people often think of Australia as the home of the marsupials, in fact we also have a range of placentals. For many years I was involved in mammal survey work, travelling all around Victoria and was fortunate enough to see and handle a wide range of our beautiful native animals. So, let's have a look at what you can see around this area. All these photos were taken by me, although not all are in the local district.

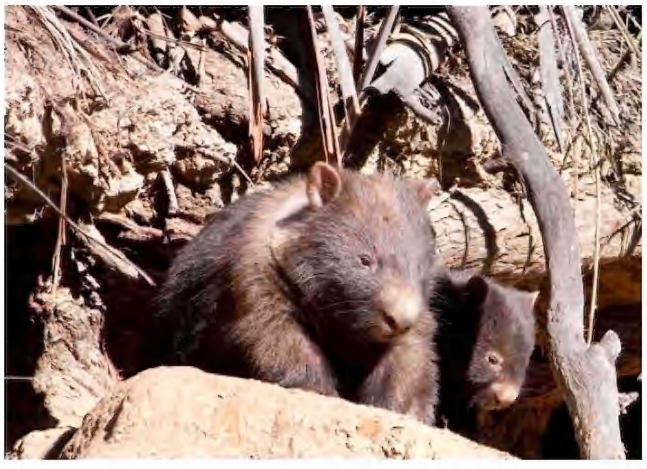
The Water Rat or Rakali (*Hydromys chrysogaster*) is far more common than people realize and is often active during the day. I have seen them around here in such diverse places as the Loddon River near Newstead and at Baringhup and on the Avoca River. They are also common in Lake Wendouree in Ballarat in the midst of the tourist area where crowds and noise do not seem to affect them and neither do droughts. Lake Wendouree, The Loddon and the Avoca rivers all dried up in the big drought, but water rats have bounced back. Amazing resilience! I have also seen them swimming in the bay at Williamstown near the dockyards – not exactly a pristine natural environment.

The word “rat” has all sorts of connotations, but in fact Australia has a range of rats related to, but quite different from, the rats you are likely to see around your house if you are unlucky. The house rats that you are most likely to see are the Brown or common rat (*Rattus rattus*) or more rarely the Black rat (*Rattus norvegicus*).

However, we also have several native rats. In this region it is possible to see the Bush Rat (*Rattus fuscipes*) and in damper areas the Swamp Rat (*Rattus lutreolus*). These two species are from the same genus as the domestic rats, but favour bush areas and along damp zones in the case of the Swamp Rat. Both natives tend to be smaller, darker and with shorter tails (especially the Swamp Rat) than the Brown Rat. For inexperienced observers though, it can be hard to tell at first glance.

Above: Brown Rat - seen swimming in the river. Can be confused with Rakali, but it does not have a white tip to the tail. Right - Swamp Rat – can be seen during the day if you are quiet (like waiting for a bird to appear). Has a very short tail.

Clockwise:
Black Wallaby, Tuan, Yellow-footed Antechinus, Fat-tailed Dunnart, and Agile Antechinus showing pouch with tiny young



Above: Wombat and young; Right: Although quite uncommon in the area, the Koala can be found in a few locations - this one in the Muckleford forest on a hot day.

Clockwise:
Left - Echidnas are common throughout the region. At times they can be very curious - this one was exploring the front door of our previous house.

Sugar Glider running down a trunk, Brush-tailed Possum, and Ring-tailed Possum

Moving on to the marsupials, the obvious ones are the Grey Kangaroo, ubiquitous even in town at times and the more secretive Black Wallaby that is more often than not solitary, but not uncommon throughout the Castlemaine Diggings area. I am often out early in the mornings on my bike and regularly see them along the bush tracks.

We also have a variety of small predators (Dasyurids) - marsupials that can be seen in the area. All have tiny but razor sharp teeth than can hurt if they get a soft spot as I know only too well! Much work has been done on creating nest boxes for the Brush-tailed Phascogale or Tuan (*Phascogale tapoatafa*). They tend to avoid humans but can sometimes be seen during the day moving rapidly about the place in search of food. This one ran straight up a brick wall when he saw me.

Smaller than the Tuan are the Antechinus species. In the drier areas the Yellow-footed Antechinus (*Antechinus flavipes*) is very common although rarely encountered unless you are observant. I have often seen them running up and down trees in full daylight at a variety of locations ranging from Muckleford, Vaughan Springs and Mount Beckworth near Clunes. Other species that can be seen include the Dusky Antechinus (*Antechinus swainsonii*), the largest of the group which favours wet forests, and Agile Antechinus (*Antechinus agilis*), generally only in wetter areas like down towards Daylesford. All of these species are well known for the wild mating period and the subsequent death of all males, leaving only pregnant females to continue on to the following season.

Dunnarts are also to be found in the drier areas to the north. The Fat-tailed Dunnart (*Sminthopsis crassicaudata*) favours the drier grasslands and woodlands. It is one of my favourite marsupials.

Only recently I was surprised to see signs of wombat out near Mount Alexander. These cute animals are more common south of Castlemaine in the aptly named Wombat Forest. They tend to produce almost cubic droppings, but I have no idea why!

The monotremes or egg-laying mammals are well known – the Echidna and the Platypus can both be found in the region. The Echidna is widespread throughout the area, but the Platypus can also be seen in various spots like along the Campaspe River near Axedale. Like the water rat, platypus can be found even in noisy urban areas – I have even seen platypus in the Yarra next to a noisy football ground in Heidelberg, but no football followers even knew it was there.

And last but not least are the possums. The Sugar Glider (*Petaurus breviceps*) is widespread in the area and at times is in competition with Tuans for nesting boxes as you may have seen in some videos on local websites.

Although considered a pest by some, the Brush-tailed Possum is to be admired for the way it has adapted to human environments - some might say too well.

Last, but not least is the Ring-tailed Possum. A quiet and generally slow-moving possum that prefers dense vegetation, but has also adapted to human habitation as well.

Observations

- Occurrences of flowering wattles (especially Golden wattle) were noted by several at the meeting
- Christine K reported seeing a Grey Goshawk near Macedon while en route to Melbourne
- George B during a trip through the Western district recently noted numerous Kites along the road, and was alarmed to find that many of the lakes through the district were dry
- Geraldine today found an Emerald-lip Greenhood (*P smaragdyna*) in flower on the Pipeline Track

Later -

- Richard noted a Golden Whistler at Jan Juc and a Grey Butcherbird in the garden at Sunshine
- Geraldine claims a sighting of Strong-billed Honeyeaters (a Tasmanian species similar to our Black-chinned Honeyeater) at Anglesea

Claire Morgan sent these marvellous photos of Speckled Warblers - Despite their spectacular markings (see cover photo) the images below show how well they are camouflaged when foraging on the ground.

Female Speckled Warbler carrying a grub (left) and male (right)

Disclaimer: The opinions expressed in this newsletter are those of the contributors and not necessarily those of the club

Castlemaine Field Naturalists
Coming events

Fri August 14 meeting: Speaker ROD ORR:
"Bendigo's botanical wonders"

Sat August 15 field trip: to the Whipstick bushland

Fri Sept. 11 meeting: Speaker JASON EDWARDS: Wildlife photography

Fri October 9 meeting: Speaker ANDREW SKEOCH: Soundscapes

Fri November 13 meeting: Speaker JULIE WHITFIELD: Butterflies

Fri December 11 meeting: Members night

VISITORS ARE WELCOME AT CLUB ACTIVITIES

General meetings - (second Friday of each month, except January) are held in the Uniting Church (UCA) Hall (enter from Lyttleton St.) at 7.30 pm.

Field Trips - (Saturday following the general meeting) leave from the car park opposite Castle Motel, Duke Street at 1.30pm sharp unless stated otherwise. BYO morning and/or afternoon tea. Outdoor excursions are likely to be cancelled in extreme weather conditions. There are NO excursions on total fire ban days.

Business meetings - third Thursday of each month, except December, at George Broadways; 24a Greenhill Ave., at 6.00 pm. Members are invited to attend.

Club website - http://castlemainefnc.wordpress.com/

Subscriptions for 2015
Ordinary membership: Single $30, Family $40
Pensioner or student: Single $25, Family $30
Subscription includes postage of the monthly newsletter, Castlemaine Naturalist

2015 Committee

President:	Nigel Harland		5474 8246
Secretary:	George Broadway	georgebroadway@bigpond.com	5472 2513
Treasurer:	Elvyne Hogan		

Geraldine Harris	5474 2244	Richard Piesse	0448 572 867
Max Schlachter	5472 1594	Noel Young (Editor)	5472 1345

[email newsletter material to: **noel.young@optusnet.com.au**]

Castlemaine Field Naturalists Club Inc. PO Box 324, Castlemaine, 3450.
Inc #A0003010B